

*Workshop*

## **Imaging of Stellar Surfaces**

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**Title:**

Using null crossing observations to characterize the structure of stars and detect faint companions

**Abstract:**

We will present results from null crossing techniques currently being developed at the Navy Precision Optical Interferometer. These techniques combine the use of multiwavelength interferometric observations around a null crossing, and coherent integration, to obtain high precision measurements of stellar diameters, stellar structure, and to detect faint companions. We will discuss the limitations of these techniques for the detection of small amplitude stellar pulsations, for the detection of exoplanets and the characterization of their orbits. The use of these techniques also plays an important role for imaging these targets, given the gains in sensitivity they allow us to achieve.